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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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07/655,857 02/15/91 TROUNSON

J 018420-001

EXAMINER

BURNS, DOANE, SWECKER & MATHIS  
GEORGE MASON BLDG.  
WASHINGTON & PRINCE STS.  
P.O. BOX 1404  
ALEXANDRIA, VA 22313-1404

23M1

BROWN, T

ART UNIT

PAPER NUMBER

2306

DATE MAILED:

04/17/93

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 1-11-93 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), — days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948.                   |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.                 | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474.     | 6. <input type="checkbox"/> _____  |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-4, 7-13, 15 and 18-23 are pending in the application.

Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

2. ☐ Claims \_\_\_\_\_ have been cancelled.

3. ☒ Claims 4 and 7-10 are allowed.

4. ☒ Claims 1-3, 11-13, 15 and 18-23 are rejected.

5. ☐ Claims \_\_\_\_\_ are objected to.

6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed on \_\_\_\_\_, has been ☐ approved. ☐ disapproved (see explanation).

12. ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received  
☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-3 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hyatt.

As per claims 1-3, Hyatt discloses in figure 1 and column 6 the limitations set forth in these claims.

3. Claims 1-3 are rejected under 35 U.S.C. § 103 as being unpatentable over Daggett in view of Hyatt.

As per claims 1-3, Daggett discloses a digital position and velocity feedback system for a multi-axis machine which only differs from these claims by not using a single active processor to control the multi-axis machine. Hyatt discloses a computer system architecture wherein a microcomputer, single active processor, is used for direct interaction with a machine to enhance communication and to reduce special purpose interface circuitry.

It would have been obvious to one of ordinary skill in the control art to replace the multi-computational source as disclosed by Daggett with the single active processor as disclosed by Hyatt for the purpose of having direct interaction with a machine which enhances communication and reduces special purpose interface circuitry.

4. Claims 11-13, 15, and 18-23 are rejected under 35 U.S.C. § 102(b) as being anticipated by Gutman et al.

As per claims 11-13, 15, and 18-23, Gutman discloses an interactive spline function controlled positioning mechanism such

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as a machine tool. A movable element of the machine tool is driven about a plurality of axes under computer control along a path formed by a plurality of sections. Each of the path section is represented in parametric form by spline function. The element is driven through a plurality of intermediate positions approximating positions on path sections. An interactive recursive algorithm permits efficient computation of the intermediate positions.

5. Claims 4 and 7-10 are allowable over the prior art of record.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Brown whose telephone number is (703) 305-9763.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9749.

*Jerry Smith*  
JERRY SMITH  
SUPERVISORY PATENT EXAMINER  
ART UNIT 236

Tom Brown *TB*  
April 14, 1993